

REMARKS/ARGUMENTS

Claims 53-83 are pending. By this Amendment, claims 24-51 are canceled in view of new claims 53-83. Reconsideration in view of the above amendments and the following remarks are respectfully requested.

In paragraph 2, the Office Action indicates that the species restriction of Group I in the Office Action mailed September 20, 2006 is withdrawn, although the Group restriction in the Office Action is not withdrawn. In any event, claim 52 which was previously withdrawn from consideration does not appear in the new claim set.

In paragraph 5 of the Office Action, various minor claim objections relating to idiomatic English corrections have been effected in the new claim set. In addition, the new claim set does not include a claim corresponding to canceled claim 50.

Reconsideration and withdrawal of the objections are respectfully requested.

In paragraph 8 of the Office Action, claims 24 through 50 were rejected under 35 USC §112, first paragraph, since claim 24 recited that the severing edge is more advanced in the receptacle in an intended direction movement of the severing element. New claim 53 specifies that the severing edge defines a leading portion of the receptacle which is more advanced than a trailing portion of the receptacle in an intended direction of movement of the severing element. This feature is clearly and unambiguously disclosed in Figures 1 and 3-14 of International Application No. WO 2004/039553, which forms the priority basis for the present application.

The severing element has a first end portion connected to the back wall and a second end portion at which the severing edge is provided. The removing elements advance along a direction G in order to interact with the plastics exiting from the extruder. As clearly shown in the above-mentioned Figures, the severing edge is arranged at a greater distance from the axis D than the other elements that define the receptacle. During operation, therefore, the severing edge interacts with the plastics before the side wall and the back wall. In other word, a dose of plastics is, first of all, removed from the extruder and, subsequently, received into the receptacle.

It is therefore clear that the above-described embodiment of the invention unambiguously discloses a device in which the severing edge defines a leading portion of the receptacle which is more advanced than a trailing portion of the receptacle in an intended direction of movement of the severing element.

Figure 4 and 5 show another embodiment of the device in which the disk to which the removal elements are connected and the extruder are mounted so that the rotation axis D of the disk and the axis L of the nozzle are arranged horizontally and mutually parallel.

The removal elements are rigidly coupled to the peripheral region of the disk and the severing edge of the severing elements are arranged radially and lie on a vertical plane that is tangent to a rim of an outflow orifice of the extruder.

Also in this case, first of all the severing edge interacts with an amount of molten plastic exiting from the extruder to obtain a dose, and, subsequently, the removed dose is received into the receptacle. No portion of the plastics exiting from the extruder enters the receptacle before the severing edge has begun to cut the dose.

It is therefore clear that according to this embodiment of the device the severing edge defines a leading portion of the receptacle which is more advanced than a trailing portion of the receptacle in the direction of movement of the severing element.

Figures 6 and 7 show a further embodiment of the device in which the extruder is positioned so that its axis L is vertically arranged and an orifice thereof is directed downwardly.

The rotation axis D of the disk is inclined with respect to the vertical by 45°. The removal elements fixed to the disk are oriented so that during rotation of the disk the severing element is horizontal in the point of tangency with a rim of the orifice of the extruder and is vertical in the diametrically opposite position in order to allow unloading of the doses.

As clearly shown in Figure 6, the severing edge interacts with the plastics exiting from the extruder in order to remove a dose, said dose being subsequently received into the receptacle.

Also this embodiment, therefore, shows a severing edge defining a leading portion of the receptacle which is more advanced than a trailing portion of the receptacle in the direction of movement of the severing element.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 24-51 were rejected under 35 USC §112, second paragraph. This rejection is respectfully traversed.

In the Office Action, claims 24 and 51 were specifically rejected since they recited “a device for removing doses ..., said removal element comprising ...” which was alleged to be indefinite as to its metes and bounds in the Office Action. By this Amendment, new independent

claims 53 and 81, which are based on claims 24 and 51, respectively, refer to a device for removing doses of plastic material from an extruder and for delivering the doses to a forming apparatus in which the doses are compression molded.

Basis for this amendment may be found on page 1, lines 7-9, of the international application WO 2004/039553 (*"devices for removing doses of plastic material from an extruder and depositing them in input to a carousel that is adapted for example to form by compression moulding articles"*). Further basis may be found on page 3, lines 17-20, of the international application WO 2004/039553 (*"a device according to the invention for removing doses of plastic material to be fed into a molding carousel 2"*). Still further basis may be found on page 5, lines 6-9, of the international application WO 2004/039553 (*"each removal element 8 remains superimposed on a respective recess 5 in order to allow the doses taken by the elements 8 to be deposited in the respective recess"*). Further basis may be found on page 6, line 25-30, of the international application WO 2004/039553 (*"there is the upper portion 27 of a conveyor belt, on which closures 28 advance in succession, acting as replacement of the recess 5, the doses being successively punched into said closures"* and also *"unloading of each dose 6 from the containment receptacle 15 into the respective closure 28 [...]"*).

New claims 53 and 81 differ from claims 24 and 51, respectively, in that they now specify that the receptacle retains the dose while the at least one removing element moves from a first position, in which the at least one removing element interacts with the extruder, to a second position, in which the at least one removing element interacts with the forming apparatus, the receptacle depositing the dose into a recess associated to said forming apparatus and defining a molding chamber for the dose.

Basis for this amendment may be found on page 5, line 26-30, and on page 6, lines 1-15, of the international application WO 2004/039553 which discloses that *"with the rotation of the disk, the blade 14 [...] severs a dose 6 from the stream 26 of plastic material that exits from the orifice 24b of the extruder 23"*. The international application WO 2004/039553 further discloses that *"the dose 6 can be easily accommodated in the receptacle 15, where it is retained"*. In addition, the international application WO 2004/039553 discloses that the receptacle unloads *"the dose into respective recess 5 of the carousel 2"*. Further basis may be found on page 6, lines 29-30, and on page 7, lines 1-3, of the international application WO 2004/039553 which

discloses that *“the unloading of each dose 6 from the containment receptacle into the respective closure 28 occurs [...] in a diametrically opposite position with respect to the position for severing and removal from the outflow orifice 24b”*. Still further basis may be found on page 7, lines 9-14, of the international application WO 2004/039553 which discloses that *“the removal elements 8 fixed onto the conical surface are oriented so that during the rotation of the disk 7 the cutting edge 14a is horizontal in the point of tangency with the rim 25 of the orifice 24b of the extruder 23 and is vertical in the diametrically opposite position in order to allow the unloading of the doses into the closure 28”*.

Further basis may be found in Figures 1 and 4-7 of the international application WO 2004/039553 which clearly and unambiguously show that the receptacle retains the dose while the removing element moves from a first position (arranged in the left region of Figure 1 and in the upper region of Figures 4-7), in which the removing element removes a dose from the extruder, to a second position (arranged in the right region of Figure 1 and in the lower region of Figures 4-7), in which the removing element deposits the dose into a molding chamber, the molding chamber being defined in the embodiment of Figure 1 by the recess 5 (see also page 3, lines 21-24, of the international application WO 2004/039553 which discloses *“a circular turntable 4 that is provided peripherally with a plurality of recesses 5 that constitute the article molding chamber and are part of the lower mold parts of compression molding units”*) and in the embodiments of Figures 4-7 by the closure 28 (see also page 6, lines 25-28, of the international application WO 2004/039553 which discloses *“the upper portion 27 of a conveyor belt, on which closures 28 advance in succession, acting as a replacement of recesses 5, the doses being successively punched into said closures in order to form the sealing liners”*).

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 24-27, 29, 30 and 51 were rejected under 35 USC §102(b) over Cuff (U.S. patent no. 3,792,950) or Kleeb (U.S. patent no. 3,324,510). These rejections are respectfully traversed.

US 3,792,950 (*Cuff*) discloses an apparatus for pelletizing synthetic plastic resins, comprising an extruding die assembly having extrusion orifice sleeves pervious to liquid, and a water jacket surrounding each sleeve in such manner that water will pass through the walls thereof to chill plastic being extruded therethrough while at the same time lubricating passage of the plastic therethrough. The apparatus further comprises severing means which are provided at

the die face for cutting the plastic into pellets as it is extruded. The severing means comprises a knife support plate 149 on which knife holders 150 are mounted. Each knife holder 150 comprises a body 156 which is provided with a channel 158 adapted to receive in sliding relationship a body portion of a cutting knife. Each of the cutting knives is provided with a cutting edge 174.

Cuff does not disclose an apparatus which delivers doses of plastic material to a forming apparatus in which the doses are compression-molded.

The apparatus disclosed in *Cuff* removes the doses from an extruding die assembly. The doses, however, after being removed, interact with a flow of water which cools the doses and carries the doses away from the cutting knives.

In other words, *Cuff* discloses a palletizing apparatus, i.e. an apparatus for obtaining solidified pellets of plastics to be subsequently used for feeding forming apparatuses in which the pellets are heated again, and not an apparatus which removes a dose from an extruder and delivers the dose to a forming apparatus.

According to the claimed invention, on the contrary, the dose is removed from an extruder and transferred to a molding chamber to be compression-molded.

In addition, *Cuff* does not disclose an apparatus in which a receptacle retains the dose while at least one removing element moves from a first position, in which the at least one removing element removes a dose from the extruder, to a second position, in which the at least one removing element deposits the dose into a molding chamber.

In the apparatus disclosed in *Cuff*, in fact, the doses, after being removed, are not retained within the receptacles, but are immediately removed from such receptacles by the flow of water.

US 3,324,510 (*Kleeb*) discloses an apparatus for the production of granules from plastic material, comprising a knife shaft 5 carrying a cylindrical housing which encloses a chamber 6 and supports knife arms 7 arranged in cross form. The knife arms 7 are made hollow, so that an open channel is produced in which there is conducted a gaseous medium 9. In this channel granules 20 – cut away from an extruder by the knife arms 7 – are received and conducted radially outwardly together with the gaseous medium 9 at high speed by the centrifugal action. In the gaseous medium 9 the granules 20 are caught and kept separate from one another and conducted outwards into a reception housing 10.

Kleeb does not disclose an apparatus which delivers doses of plastic material to a molding chamber in which the doses are compression-molded.

The apparatus disclosed in *Kleeb*, in fact, removes the granules from an extruding device. The granules, however, after been removed, interact with a gaseous medium which carries away the granules from the knife arms.

In other words, *Kleeb* discloses an apparatus for producing granules from plastic material, i.e. an apparatus for obtaining solidified particles of plastics to be subsequently used for feeding forming apparatuses in which the particles are heated again, and not an apparatus which removes a dose from an extruder and delivers the dose to a forming apparatus.

According to the claimed invention, on the contrary, the dose is removed from an extruder and transferred to a molding chamber to be compression-molded.

In addition, *Kleeb* does not disclose an apparatus in which a receptacle retains the dose while at least one removing element moves from a first position, in which the at least one removing element removes a dose from the extruder, to a second position, in which the at least one removing element deposits the dose into a corresponding molding chamber.

In the apparatus disclosed in *Kleeb*, in fact, the doses, after being removed, are not retained within the receptacles of the knife arms, but are immediately removed from such receptacles by the gaseous medium.

Reconsideration and withdrawal of the rejections are respectfully requested.

Claim 28 was rejected under 35 USC §103(a) over Cuff or *Kleeb*, and further in view of Pandur (U.S. patent no. 3,972,666). This rejection is respectfully traversed at least for the reason that claim 57 which corresponds to original claim 28 depends from claim 53 and is patentable by virtue of that dependency and the further features it recites.

Reconsideration and withdrawal of the rejection are respectfully requested.


In view of the above amendments and remarks, Applicants respectfully submit that all the claims are patentable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, he is invited to contact the undersigned at the telephone number listed below.

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Respectfully submitted,

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